Urology Case Reports 2 (2014) 83–84

Contents lists available at ScienceDirect

Urology Case Reports

journal homepage: www.elsevier.com/locate/eucr

Oncology

Chronic Cystitis Associated With Keratinizing Squamous Metaplasia Progressing to Squamous Papilloma☆

Corinne Puzio*, Gennady Slobodov

Department of Urology, University of Oklahoma Health Sciences Center, Oklahoma, OK

ARTICLE INFO

Article history:
Received 16 February 2014
Accepted 3 March 2014

Keywords:
Metaplasia
Urothelium
Papilloma

ABSTRACT

We present a patient with extensive keratinizing squamous metaplasia that progressed to squamous papilloma over the course of follow-up. To our knowledge, this is the first published case of keratinizing squamous metaplasia with melanotic deposits of an unknown material with synchronous development of squamous papilloma.

Introduction

Keratinizing squamous metaplasia of the urothelium is an uncommon pathologic finding in the bladder and is usually associated with chronic infection or irritation.[1,2] This condition should prompt careful evaluation and follow-up as it is considered a premalignant lesion.[3] We present a patient with this condition, who was also found to have squamous papilloma on long-term follow-up.

Case presentation

A 68-year-old woman presented for evaluation of urinary retention, dysuria, mixed urinary incontinence, and recurrent urinary tract infections. She had previously been evaluated by a different physician for similar complaints 7 years before, and urodynamics performed at that time revealed an atonic bladder associated with valsalva voiding and recurrent coliform urinary tract infections. She was lost to follow-up until she represented to clinic with the same complaints. A computed tomography scan of the abdomen and pelvis with and without intravenous contrast and with delays revealed multiple lesions in the bladder that were concerning. Cystoscopy revealed multiple patches of white flaky material adherent to the bladder wall throughout, with patches of gray and black discoloration. The patient was started on a course of intermittent self-catheterization for retention.

Several distinct abnormal-appearing areas were biopsied, including an area of whitish sheet-like lesions, plaque-like white lesions commonly associated with keratinized squamous metaplasia, and an area with black discoloration. Pathology revealed subepithelial deposition of dark-colored, polarizable, needle-shaped crystals of unknown composition in the area of discoloration. Other biopsy sites showed keratinized squamous mucosa.

Despite treatment with culture-specific antibiotics and self-catheterization as well as treatment with prophylactic antibiotics, the patient continued to show the same lesions on serial office cystoscopies. These areas were rebiopsied 1 and 3 years after the initial biopsy, without significant change in the pathologic findings.

Four years after initial presentation, the patient was again taken to the operating room for cystoscopy and biopsy. On this examination, multiple papillary tumors were noted and biopsied. The largest was approximately 5 cm in diameter with several satellite lesions. Representative biopsy revealed squamous papillomas. After counseling the patient regarding these findings, we recommended continuing follow-up with cystoscopy and periodic rebiopsy.

Discussion

A review of the urologic literature reveals only 12 reported cases of squamous papilloma. Current literature suggests that although the appearance and presentation may mimic urothelial carcinoma, squamous papilloma is benign and not thought to be a risk factor for bladder cancer.[2] Extensive keratinization of the bladder has been associated with bladder contracture and risk of development of metachronous bladder cancer.[4]

* Corresponding author. Tel.: +1-3179196382; fax: +1-4052713118.
E-mail address: corinne-puzio@ouhsc.edu (C. Puzio).

2214-4420/$ – see front matter © 2014 The Authors. Published by Elsevier Inc. All rights reserved.
http://dx.doi.org/10.1016/j.eucr.2014.03.001

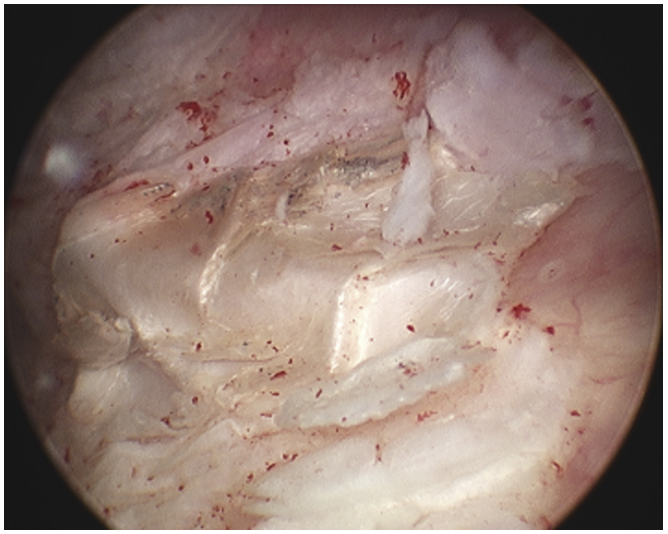

Figure 1. Representative images from cystoscopy and biopsy.

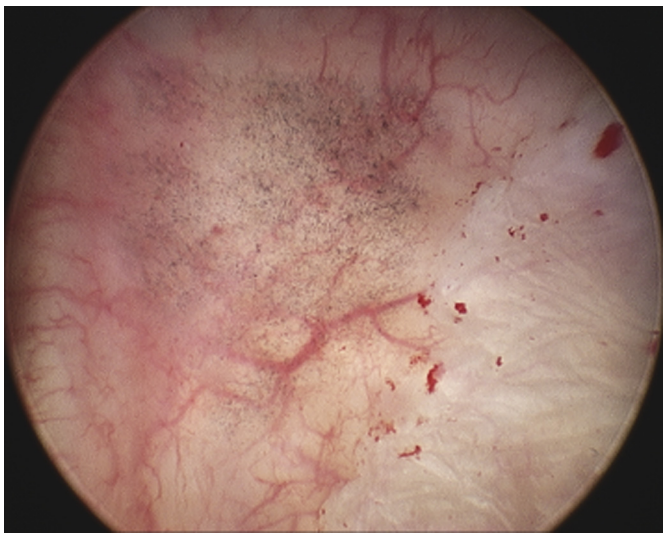

Figure 2. Representative images from cystoscopy and biopsy.

Figure 3. Representative images from repeat cystoscopies and biopsies. Note the melanotic suburothelial discoloration.

Conclusion

For this reason, we suggest that it is prudent to continue surveillance with periodic rebiopsy in patients with keratinizing squamous metaplasia that does not resolve with conservative therapy. To our knowledge, this is the first published case of keratinizing squamous metaplasia with melanotic deposits of an unknown material with synchronous development of squamous papilloma.

References

1. Cheng L, Leibovich BC, Cheville JC, et al. Squamous papilloma of the urinary tract is unrelated to condyloma acuminata. *Cancer*. 2000;88:1679–1686.
2. Guo CC, Fine SW, Epstein JI. Noninvasive squamous lesions in the urinary bladder: a clinicopathologic analysis of 29 cases. *Am J Surg Pathol*. 2006;30:883–891.
3. Benson Jr RC, Swanson SK, Farrow GM. Relationship of leukoplakia to urothelial malignancy. *J Urol*. 1984;131:507.
4. Khan MS, Thornhill JA, Gaffney E, et al. Keratinising squamous metaplasia of the bladder: natural history and rationalization of management based on review of 54 years' experience. *Eur Urol*. 2002;42:469–474.